



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

n

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/485,598 02/14/00 SHERMAN

B 2051-36

023607
IVOR M HUGHES
175 COMMERCE VALLEY DRIVE WEST
SUITE 200
THORNHILL ON L3T 7P6
CANADA

HM12/0928

AIR MAIL

EXAMINER

PULLIAM, A

ART UNIT

PAPER NUMBER

1615

DATE MAILED:

09/28/01

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/485,598

Applicant(s)

SHERMAN, BERNARD CHARLES

Examiner

Amy E Pulliam

Art Unit

1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1615

DETAILED ACTION

Receipt is acknowledged of the Information Disclosure Statement, Amendment B, and the Power of Attorney, received July 24, 2001, July 26, 2001, and July 26, 2001, respectively.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(q) as being unpatentable by US Patent 5,776,495 to Duclos *et al.* in view of US Patent 4,820,833 to Crisp *et al.* Dulcos *et al.* disclose a process for the production of a solid dispersion of at least one therapeutic agent in a carrier, comprising dissolving at least one therapeutic agent in an organic solvent containing a very hydrophilic polymer and evaporating the solvent to dryness to form a co-precipitate of therapeutic agent and hydrophilic polymer. Duclos *et*

Art Unit: 1615

a/. also teach the products which result from the co-precipitate and their therapeutic methods of use. (abstract). Duclos *et al.* further teach a wide range of active ingredients which can be used in the formulation, including cefuroxime (c 5, l 10). Duclos *et al.* teach that examples of the organic solvent include ethanol and acetone, among others (c 3, l 10-20). Duclos *et al.* teach the co-precipitate with a hydrophilic polymer, in general, but they specifically teach the use of polyvinylpyrrolidone (c 2, l 30-32).

Duclos *et al.* does not specifically teach the use of sorbitol as the water soluble excipient. However, it is the position of the examiner that one of ordinary skill in the pharmaceutical art knows that sorbitol, mannitol, hydroxypropylmethyl cellulose, and polyvinylpyrrolidone are all very well known, and often interchangeable excipients. Therefore, one of ordinary skill in the art would have motivation to use any of these well known, and often interchangeable excipients in the formulation disclosed by Duclos *et al.*. Additionally, Duclos *et al.* stresses that the important function of the excipient is that it be hydrophilic, so any of these well known additives would apply. One of ordinary skill in the art would expect the same result, regardless of what well known hydrophilic pharmaceutical excipient is used.

Additionally, Duclos *et al.* does not go into details regarding each disclosed active agent, such as teachings specific forms of each disclosed active, or disclosing specific percentages of each disclosed active. However, it is the position of the examiner that the a discussion of the appropriate forms and percentages for each active disclosed by Duclos *et al.* would be unnecessary. It is further the position of the

Art Unit: 1615

examiner that the specific percentage used is a limitation which would be routinely determined by one of ordinary skill in the art, through minimal experimentations, as being suitable, absent a showing of some unusual or unexpected results. The results must be those that accrue from the specific limitations.

When a skilled practitioner looks to make and use the invention of Duclose, using cefuroxime, they would look to the teachings of Crisp *et al.*. Crisp *et al.* discloses a pharmaceutical composition comprising a precipitated form of cefuroxime axetil. Crisp *et al.* discusses that this particular form of cefuroxime is beneficial because it is capable of being absorbed from the GI tract following oral administration (c 1, l 30-36). Additionally, Crisp *et al.* teach a method of precipitating by dissolving the active in an organic solvent, and spray drying to evaporate off the solvent. One of ordinary skill in the art would look to the broad teachings of Duclos *et al.*, and apply the specific teachings of Crisp *et al.*, such as the use of the specific form cefuroxime axetil, as well as the use of spray drying to evaporate off the solvent and cause formation of the precipitate (or co-precipitate). Furthermore, Crisp *et al.* detail pharmaceutical formulations using the precipitate formed, and disclose acceptable excipients such as sodium starch glycolate (c 11, l 66).

It is the position of the examiner that Duclos *et al.* disclose applicant's generic inventive concept, which is forming a co-precipitate from a therapeutic agent (such as cefuroxime) and a water soluble excipient. It is further the position of the examiner that a skilled practitioner would look to the appropriate art, such as Crisp *et al.*, to discover more specifics concerning the specific active, cefuroxime. One of ordinary skill in the

Art Unit: 1615

art would certainly be motivated to combine the teachings of these two references, in order to form a successful co-precipitate of cefuroxime and a hydrophilic excipient. Therefore, this invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy E Pulliam whose telephone number is (703) 308-4710. The examiner can normally be reached on Mon-Thurs 7:30-5:00, alternate Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on (703) 308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3592 for regular communications and (703) 305-3592 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1234.

aep
September 27, 2001

THURMAN K. PAGE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER T600